FRIENDS' INTELLIGENCER.

"TAKE FAST HOLD OF INSTRUCTION; LET HER NOT GO; KEEP HER; FOR SHE IS THY LIFE."

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SOME ACCOUNT OF RICHARD DAVIES.

(Continued from page 259.)

About the year 1663 or 1664, I went to London, and found some there separated from that love and unity which I formerly saw them in; joining in that spirit with John Perrot, who was newly come from prison at Rome to London, as it was said, with much seeming humility and lowliness of mind. A considerable company joined together with him, where they had me among them for a little time. The tendency of that Spirit was, to speak evil of Friends that bore the burthen and heat of the day, and so to cry out against Friends as dead and formal. They expected a more glorious dispensation, than had been yet known among Friends; and they kept on their hats in time of prayer. I was but a little while among them, till a vail of darkness came over me, and under that vail I came to have a light esteem for my dear and ancient Friend George Fox, and some others, who had been near and dear to me. But it pleased the Lord to rend that vail of darkness, and cause the light of his countenance to shine again upon me; whereby I came to see the doleful place I was led into, by a spirit that tended to nothing else but self-exaltation, and (under a pretence of humility and self-denial) breach of that unity, love and fellowship, that formerly we had together, and the good esteem we had one of another in the Lord. Children we were of one Father, esteeming one another above ourselves in the Lord. There was no jar or contention among us then, but all dwelt together in love and unity, and in the fellowship of that blessed gospel of peace, life and salvation.

At my return home from London, I was soon taken to the same prison with my Friends in Welch-Pool; and a little before I came among them to prison, the under-jailer dreamed that he had in his fold a flock of sheep, and that he was wrestling to get in one ram among the sheep, but could not get him in; but when I came to prison, he said to my friend Charles Lloyd, "Now I have got the old ram in among the sheep." But the jailer turned me out that night to my wife and family; and though I had the name of a prisoner, and was premunired, as the rest of my Friends and brethren were for several years, yet I was not kept close prisoner.

This was a time when most travelling Friends were taken up prisoners, and though I was a prisoner, yet it lay upon me to get liberty to go and visit Friends in several counties of England and Wales. So I followed my good Guide, that showed me what to do. I went to the jailer, and told him I had an occasion to go out a little while, and I could not go without acquainting him of it, because I was his prisoner. He said, "I warrant you will go to preach some where or other, and then you will be taken to prison; and what shall I do then, said he?" I told him that if I was taken prisoner, I would send to him where I was, and he might send

for me if he pleased; so he bid me have a care of myself.

In a little time, in the love of God I took my leave here of my friends and family, and committed myself to the protection of the Almighty. I went to Shrewsbury, and so to Worcestershire, where I had good service for the Lord; so to Tewkesbury, where I was never before. An ancient woman Friend followed my horse, and before I had put up at the inn, she was with me, and very cordially said, "She had a sense upon her, that I was one of her (heavenly) Father's children." I went in and refreshed me a little, and asked her, whether she thought I might have a meeting with Friends that evening. She readily said, "She would acquaint Friends of it;" and after she had gone a little way out of the inn, she returned again, and "desired to know my name, that she might acquaint Friends of it." I was straightened in myself to give her my name, though I knew not the cause then; but I desired her to go in the name of the Lord, and if I came in the name of the Lord they would receive me. So she went, and came again and told me, "I might have a meeting;" which was appointed to be at Susan Smithen's; and a blessed heavenly meeting we had, and the Lord gave to us our expected end; there were several professors at the meeting. Some came to me next morning, and discoursed friendly with me about the things of God.

From thence I went through Gloucestershire, where I had good meetings, and so to Bristol. When I was clear of Bristol, the Lord having blessed me, and preserved me so far in my journey, I set forward towards Pembrokeshire. I travelled without any companion but the Lord alone, who was with me all along in my journey; he was my helper and preserver. So I came to the house of our Friend Lewis Davies, who gladly received me in the Lord. Staying there some time, they lent me a horse to go to a meeting at Redstone, and I left my own horse behind me, thinking he might rest for some days after my hard riding. When I came to the place, the meeting was out of doors, there being no house, that I knew of, that could contain the multitude of people. When we came to the meeting, Meredith Edwards, (whom Friends judged unfit to preach the Gospel,) had the confidence to speak to the people, till they were weary of him, and those that were sensible were burthened by him; after some time there stood up a Friend and silenced him. I sate as a stranger among them. The Lord was with us, his good presence was our comfort and satisfaction; and after some time I had an opportunity to open to the people, those things that belonged to their eternal salvation; and having concluded the meeting in prayer, this man, M. Edwards aforesaid, stood up again and preached to the people, and I turned my back and came away, and the Friends with most part of the people followed me. As I was coming out, a Friend came and told me, there were two soldiers, (I understood afterwards, they were the two sons of a priest,) that had brought my horse there some miles. When I saw my horse I drew nigh to them, and asked them, who brought my horse there? They asked me, "Whether I was the man that came from Bristol?" I said I was; then, said they, "You are the man we look for." I asked them by what authority they came, or what warrant they had, and they showed me their swords and pistols. I told them, such warrants highwaymen had. Then I asked them, how they durst venture so, among such a company? They said, "They knew we were peaceable men, and would not resist; otherwise, they would have brought greater force." I told Friends, we were not bound to obey them, and desired Friends to part, and leave only two or three with me; but Friends' love was so great to me, that they kept mostly in a body about me. So I desired the Friend, to take my saddle and bridle, that was upon the Friend's horse that I rid to the meeting on, and put them upon my own horse; so I got upon my horse, and bid them lay their hands off my horse, for I feared not their swords nor pistols; but if they had a warrant from any justice of peace, or lawful magistrate within in the county, I would obey it. Then they let my horse go, and I turned a little aside, and saw them lay hold of the other man, M. Edwards; I could not call him a Friend, because he was not guided by a right spirit; and I turned myself to them again, and told them, that if any justice of peace, or any lawful magistrate within in the county, had anything to say to me that came from Bristol, they should hear of me at the house of William Bateman in Haverford-west. I told them my business would require some stay in the country; so they let us go pretty friendly; and I had several brave meetings in Haverford-west, and other places in the country. The last I had was at Ponchison among the Welch; they having notice of a Welchman coming to keep a meeting in those parts, many came to that meeting, and good service I had for the Lord, his truth being declared in their own language to them. We had the meeting out of doors, and I stood with my back towards Thomas Simmon's wall of his house. I was young and strong, and my voice was heard to the steeple-house, and most of them came out to hear me; and very few came out with the priest when he had done. When the priest saw such a multitude, he was moved to passion, and would have had the constable take me down. It was reported,

some said to the priest, they would not take me down, for I preached Christ and the Gospel to them, and they would have him come and learn of me himself. I was informed, that the priest's wife and two of his daughters were at the meeting, and were very loving and tender, and came to be convinced of the truth. The Lord was not wanting to us; his life, power and good presence was with us, and that meeting was the last I had in Pembrokeshire at that time. The Friends of that county were very loving and careful of Friends that came from far to visit them. They dwelt in love and unity among themselves. My service was weighty upon me, being myself only, without a companion; the Lord alone, that knew the integrity of my heart, was my comfort, support and exceeding great reward. As for M. Edwards, the two men before mentioned took him before a justice; the justice would have been moderate to him, and would have showed him kindness, but he, by his ungoverned temper, provoked the justice to passion, so that he committed him to the House of Correction as a vagrant for three months, to the great trouble of Friends.

I was informed that the justices and magistrates of that county were generally very moderate in the hardest times of persecution. From Ponchison I took my leave of Friends in Pembrokeshire, and came pretty directly home, blessed be the name of the Lord, to the comfort of my wife and family, and those Friends that were prisoners; and the jailer was well satisfied that I came to my prison, without farther trouble to him; there were several taken prisoners, at those meetings I was at, but the Lord preserved and delivered me, blessed be his holy name forever.

(To be continued.)

EXTRACT FROM A LETTER DATED SIXTH MONTH 28, 1863.

It is a delightful season of the year to be in the country; the rains of the last day or two have had a wonderful effect upon all growing things, and vegetation is looking fresh and vigorous. The animated creation makes the air vocal with expression, each after his kind, and all nature is alive and joyous. What a lesson is this for some of us who would dwell too much within ourselves. I never felt more than lately the solemn teachings of Providence through his works, and his outward operations, how each thing is constituted to arrive at perfection by simply yielding to that gradual progression which is suited to its needs, and how if these laws are not violated it will grow into the fulness of the Godhead, "As full, as perfect, in a hair as heart." If the flower is planted in a poor soil, if the sunshine seldom smiles upon it, or the rains of heaven visit it but seldom, the little plant has nothing to do with these discouraging surroundings, but it must hold up its head and grow the best it can, and it will fulfil the law of its being. So, likewise, we are accountable for the use of the faculties bestowed upon us, and if we endeavor to employ these in accordance with the design of the Giver, may we not reasonably expect His blessing on our efforts, and in our spirits feel His spirit shine, "As shines the sunbeam in a drop of dew."

Oh, what can be compared with this consciousness of Deity present with us—what could be greater joy! Then, shall we not be joyous who are heirs of such great joy? Even when pressed down with a sense of our deficiencies and discouragements, we can take comfort in the thought that these light afflictions are but of the night, but joy cometh in the morning.

THOUGHTS ON CHRISTIAN RETIREMENT.

FROM THE WRITINGS OF THE LATE FREDERICK MYERS.

(Concluded from page 261.)

But to return to the suggestion that for the purposes of the spiritual life of the individual soul, labor and prayer are interdependent. Every life of Christian efficiency must be one of frequent meditation. No one can be really spiritually wise who does not study the human heart at its source, and he can only approach near to that in the depths of his own experience. Experience of the world, as it is called, is said to bring with it wisdom, and in some cases with reason, inasmuch as it certainly does enable men to calculate correctly the commonplaces of life, to conjecture skilfully the ordinary chances of conduct; but it does very little indeed to help us in understanding or in influencing the interior life of the earnest and of the unworldly. Here it is helpless, and worse. The eye that would see this must be enlightened from within—the hand that would stir more than the surface must be strengthened from above.

And again consider: evangelical religion is emphatically a service of the spirit. It is the cultivation of a peculiar state of mind and heart—a state which is the preliminary condition essential to the acceptable performance of any act of duty whatsoever; and for the attainment of this characteristic state of thought and feeling, steady and frequent contemplation of the distinguishing articles of the Christian faith is indispensable. The performance of any series of acts, whether of worship or of morality, is not the essence of Christianity, it is only its result; and though it uniformly causes its faithful recipients to perform all those duties which lead to the worldly well-being of others and themselves, yet it does not

really reside in any heart wherein there is not a sentiment towards Christ, which gives to those acts a significance and a worth quite other than that derived from their natural, visible consequences. Thus the view taken of life and duty by the Gospel of Christ, by affecting our motives and modes of thought, makes the cultivation of our souls the one thing needful for us—all else, however important, only secondary. * * * * * The education of our own souls, the working out our own salvation through faith, and penitence, and prayer, and love—the calling out into exercise every faculty He has given us by every opportunity of grace which he may give us—doing all that we do with reference to His will, and in reliance on His help, and out of gratitude for his grace—this should be the great aim and business of our lives. And all the rest that we do in the world, whatever it be—let it be a course of works of duty, or of benevolence never so good—to be of worth in God's sight, or to be for our own ultimate good, must be done subordinately to this great end, and in conformity with these great principles. Our greatest business then in this world is not to *do* good, but to *be* good—not to be as useful to our brethren as we can, but so to become changed by God's Spirit into his image that we may be fitted to live in closer communion with him forever. To love our neighbor as ourselves is only the second of the commandments—to love God above all, this is the first. And unless all our duties are thus performed with reference to God's will, and from gratitude for his grace, then however outwardly useful our course of living may seem to be, for the highest purposes of life it is useless. Most thankful ought we to be indeed, when God makes our earthly allotment of duty to be in its own nature favorable to our bringing forth much fruit to his glory and to the good of our fellow-men. Perhaps there can be no more glorious spectacle than that of a man who, thankful for having been redeemed, and feeling himself being sanctified, is evidently also being permitted to be a co-operator with God in bringing about some great purpose of his providence—energetically and faithfully performing wide-spreading duties, with eye and heart ever uplifted towards Him who he believes has been the Author and will be the Finisher of his faith; and thus, so passing through things temporal as to make them all helps to his gaining the things that are eternal. Such a spectacle, I say, of active and extensive usefulness combined with personal edification, is one of the highest and most attractive interest. But let it also be remembered how great a truth it is, that

"They also serve who only stand and wait"—

and that meekly to suffer God's will is as sublime a duty as actively to do it.

As individuals, then, let us cherish a spirit of contemplation—let us improve a time of rest. When the world is too much with us, let us "Rest awhile." When our very works of duty or labor of love render us unquiet or distracted, let us "Rest awhile." When our studies, however intellectual, are engrossing or harrassing us more than usual, let us "Rest awhile." "Rest," however, not for mere indolence and slumber, but for that renewal and refreshing of the mind which closer communion with God can alone impart. Remember that mere seclusion from the world will not of itself be necessarily improving to us. If meditation on the Unseen be not conjoined with separation from the visible, the very absence of the things we have been accustomed to, will only endear them to us the more. Closer communion with God is that alone which can efface the deepening impressions of the world, or counteract its unceasing encroachments. If there be not this, then the very examination of our own hearts will take but a form of selfishness, and our retirement will be but indolence, or worse. The heart which is empty of thoughts of God will be full of thoughts of that world which is enmity to God; it will be but a mere market-place of carnal interests, or as an open space for every worldly wayfarer to travel on or abide.

Most unwisely, then, may it be said, will he count the cost who thinks that such seasons of rest as I am recommending are superfluous or waste—that time spent in prayer is time lost to duty. Rather, our very duties may become hindrances to our improvement, if they be not done in this thoughtful spirit. If all our work, even that which has God's service expressly for its aim, be not thus ennobled and spiritualized by contemplation, however useful it may be to others, it will be fruitless and even hurtful to ourselves. We know, on apostolic authority, that a man may give all his goods to feed the poor, and his body to be burned, and yet not have that peculiar spirit which is characteristically Christian; and so perhaps it may be that a man may live a moral, and respectable, and useful life, actively engaged in a course of even religious acts, and yet not be a Christian. Devout thoughtfulness being neglected, our humility before God, and gratitude towards Christ is lessened, and thus our fruits of obedience, though seeming fair, are turning inwardly into ashes; and self-satisfaction mingling with our benevolence, we dissolve the pearl which should have been our reward in the very cup of our seeming charity. Constant activity, even in good works, has always a tendency to draw us away from watchfulness over our motives of action, and uninterrupted use-

fulness to make us think more highly of ourselves than we ought to think; and if these things be not counteracted by a self-communion and communion with God proportionate to our activity, then though outwardly and to others we be still zealous and benevolent, yet in the eyes of Him who looks not at the outward appearance only, we shall assuredly be seen to be also prouder and colder every day, and gradually less like Christ continually. Let us not then ever neglect or abridge that period of repose which the health of our souls requires to be devoted to communion with our hearts, and with Him who is greater than our hearts. Be sure that God can require of us no exertions for even the spiritual well-being of others which must of necessity impair our own; and that if our own souls are not duly edified, it will be received as no excuse hereafter that we were trying to do God more service the while; seeing that reason alone might tell us that our efforts are not essential to God's service, while Scripture everywhere represents the cultivation of personal holiness as the one thing needful for ourselves.

May this conviction grow among us, that Christian religion lies as much in discipline of the heart as in the conduct of the understanding, and may we take this as our abiding motto: "In quietness and confidence shall be your strength."

"Man's wisdom is to seek
His strength in God alone;
And e'en an angel would be weak
Who trusted in his own.

"Retreat beneath his wings,
And in his grace confide;
This more exalts the King of kings,
Than all thy works beside."

GREEN STREET FIRST-DAY SCHOOL.

We are aware that there is an increasing inclination among Friends to gather their own and the children of others on First-day afternoon with a view toward making it a profitable season to them. For the encouragement of such, the teachers of the First-day school at Green Street, published last year in the Intelligencer a short account of the manner in which they interested their scholars, and the satisfaction attending their efforts. A few weeks ago they closed for the summer. The experience of the second year has been equally encouraging. At the opening of the school last fall, the greater part of the former scholars returned, and during the session of eight months their interest continued unabated. Among the older pupils the spirit of thoughtful inquiry was as heretofore very apparent, and the animated manner in which the junior ones participated in the conversational and other lessons, has encouraged the teachers to hope that, by thus mingling with the children, they may have fostered in their minds a love for the beautiful and the true, and gained much for themselves from this intimate intercourse with the young.

If there are any who have felt desirous to enter upon a similar work, and have been discouraged by a distrust of their own abilities, we would recommend them to yield to the prompting, not looking for great things. A simple beginning may yield the fruit required.

TEACHERS.

For Friends' Intelligencer.

It was with regret I noticed in an editorial of the Intelligencer, alluding to N. R.'s communication of the 27th of 6th mo., an admission that the paying of a militia fine by Friends was a disputed point. The article on war in our Discipline says, "It being the judgment of this meeting, that if any of our members do, either openly or by connivance, pay any fine, penalty, or *tax*, in lieu of *personal service*, for carrying on war, or allow their children, apprentices or servants to act therein," &c., "that they be tenderly dealt with," &c. That manners, usages and forms change is admitted, but that immutable *principle* does, is not; its teachings have been the same in all ages. The testimony to the peaceable principle of our Lord and Saviour was not given to Friends under the influence of an enlightened reason, but by a conviction made upon the mind by the immediate operation of the Holy Spirit unfolding to them its requisitions. They ceased to reason, and gave up to the heavenly vision, and were then enabled to see the things that belonged to Cæsar and those that belonged to God; and to render that which was due to whom it was due. I do not find an instance on record where Jesus gave tribute or money in lieu of personal service. He set the example of giving property for property, or its equivalent, but never admitted the right of the governments of this world to require of their subjects duties which they felt to conflict with their duty to their Creator, or to give an equivalent therefor. This would be admitting their right to the one or the other; and if to one (in case of further necessity), just so much to the other, it having been given as a substitute, and so accepted. Our money or property is a gift of our Heavenly Father as well as any other blessing; when it is obtained or held under the influence and direction of His teachings, and we are responsible for its proper use, and are bound only to render to government that which it is entitled to for privileges enjoyed in common with our fellow citizens. In the days of early Friends the Church, so called, claimed a right, under the law, to the property of its members, and could Friends have paid tithes they would no

doubt have saved themselves much suffering; but would they have borne a testimony to a free gospel ministry, and followed the example of their Holy Pattern of suffering even unto death, rather than swerve from doing what they believed to be their heavenly Father's will? I do not undertake to review the article in question. With me the reasoning has but little force; the quotations from the New Testament do not appear appropriate, there being no evidence to my mind that Jesus ever directed money to be given in lieu of personal service required at the time by the then governmental power, but simply as his and their share of the common tax or tribute levied upon the whole people. There is nothing to show that it was for any express purpose other than for the general government expenses.

I do not wish to enter into controversy, or to disprove any one's views by argument, even if I had the ability. My impressions have been, during the sad condition of our country, that the *place* for Friends was in the stillness, to dwell in humility and watchfulness, encouraging one another to abide under the protection of that Almighty Arm that can and will sustain all those who put their trust in it.

The *Intelligencer* is received by many and looked upon as the *organ* of our Society to some extent; and it appears to me that if its columns are opened for the doubting or disproving of the established testimonies held by Friends and embodied in their discipline, I fear the tendency will be to weaken and scatter. Doubtless it is well for all to examine closely the ground taken, and thus be able to give a reason for the hope that is in them; but for Friends to go into discussion and argument among themselves as to what is *truth*, evinces that they are not settled upon the alone sure foundation as respects their professed testimonies and principles. W. G.

7th mo. 1st, 1863.

WELLS OF SYRIA.

A passage occurs in Genesis 24: 11, sq., which groups together several particulars that make up an oriental scene entirely unique. The age is that of the patriarchs; the actors are Eleazer, Abraham's servant, and Rebekah, the destined bride of Isaac; the place is a well or tank in Mesopotamia, outside of the city; the time, nightfall. "And he made his camels to kneel down without the city, by a well of water, at the time of the evening, even the time that women go out to draw water. And, behold, Rebekah came out, with her pitcher upon her shoulder; and she went down to the well and filled her pitcher and came up." A modern guide-book could hardly furnish a truer picture of what occurs at the close of every day, in the vicinity of eastern villages, than this description, written so many thousand years ago. The wells, at present, exist almost universally just out of the town; those who draw the water are women; they perform this office at other hours indeed, but especially at evening; they carry their pitchers upon their heads or shoulders; and often, though this depends on the construction of the tanks or fountains, which is not always the same, they have to go down a flight of steps, in order to reach the water. How vividly depicted in my mind are the scenes embodying these traits of oriental life, which I associate with Yebna, Ramleh, Bireh, Beitin, Lebonah, Nazareth, Kana, and other places still!

The task of fetching water for domestic uses is performed almost wholly by females. I recollect but two instances in which I saw "a man bearing a pitcher of water;" and I think that the manner in which the Saviour refers to such a circumstance (he mentions it as a sign) implies that it was not common.* Morning and evening are the times when they resort to the wells most frequently; and at such seasons they may be seen flocking thither, if the village be one of any size, in great numbers, carrying with them their skin bottles, or their pitchers and jars, which, having filled with water, they place on their shoulders, and in merry groups return to their homes. The tank at Ramleh, in the plain of Sharon, like the well to which Rebekah descended, has a flight of steps at one corner. The upper pool of Gihon, on the west of Jerusalem, has a similar descent at the south-east and south-west corners. The reservoir, supplied from the well of En-Rogel, near where the valley of Hinnom falls into that of Jehosaphat, has steps to the north-west corner. So, too, the Fountain of the Virgin, in the valley of Jehoshaphat, lies in the bosom of a deep rock; and the visitor has to descend two series of steps before he comes to the level of the water. I frequently saw women come to this place, "go down to the well," fill their bottles, and bear them away on their heads or shoulders."

Sometimes, a well sweep, or windlass is used for raising the water; but more commonly it is done by means of a rope fastened to the neck of the jar or bottle. The water is obtained in this manner from a well in the market at Athens at the present time. The woman at the well of Samaria refers to some such contrivance when she says that "the well was deep, and there was nothing to draw with." (John 4: 11.) The curb-stones are often indented with deep marks worn by the friction of the ropes employed in raising water. The modern Attica abounds in

* This remark has occasioned some inquiry. I am happy to find the observation confirmed by Dr. Barclay (City of the Great King, p. 81).

such remains of an antiquity as old probably as the time of the Persian wars.

It is a familiar sight still to see a flock of sheep, or several flocks, crouching at a watering-place; as it was in the days when Jacob "looked, and behold a well in the field, and lo! there were three flocks of sheep lying by it; for out of that well they watered the flocks." (Genesis 29: 2.) It is added, that "a great stone was upon the well's mouth." This precaution is necessary, especially in certain places where the wind would otherwise blow the sand into the well and fill it up. In approaching the ancient Sychar, I passed a well, the mouth of which was stopped with a stone so large that the united strength of two men would be required to move it. The daughters of Laban speak of the size of the stone on the well's mouth (Genesis 29: 8), as a reason why they could not water their flocks without assistance.

In Genesis 30: 38, "troughs" are mentioned, from which the sheep and cattle were accustomed to drink. I seldom saw a well, in the open country, that was not furnished with this needful apparatus. In some instances, the trough was a long stone block hollowed out, from which a number of animals could drink at once; in other instances the troughs were smaller, several of them lying about the same well, from which one animal only could drink at a time. One of the saddest sights with which the traveller has to acquaint himself is that of a sarcophagus applied occasionally to this use, which may have contained the body of a Roman procurator or a Jewish ethnarch.—*Hackett.*

UNSUSPECTED SOURCE OF DISEASE.

Analysis was recently made of water from a well in Middlesex county. The owner was certain that no impurity could arise from sources suggested, but rigid and persistent investigation disclosed the fact, that the servant girl had long been in the habit of emptying the "slops" into a cavity at the kitchen door (formed by the displacement of several bricks in the pavement,) where they were readily absorbed. Although the well was quite remote, the intervening space was filled with coarse sand and rubble stones, and hence the unclean liquids found an easy passage to the water. This proved to be the cause of illness in the family.

In cities and large towns, where excrementitious matters accumulate rapidly around dwellings compacted together, it is difficult to locate wells remote from danger, and hence it might seem that suspicion should be confined to these localities. This, however, is not a safe conclusion. How often do we see, upon isolated farms in the country, the well located within, or upon, the margin of the barnyard, near the huge manure heaps, reeking with ammonia and other gases, the prolific sources of soluble salts, which find access to the water and render it unfit as a beverage for man or beast. It may, no doubt, be a convenience to the farmer to have his water-supply so situated as to meet the wants of the occupants of his barn and dwelling, but it is full of danger.

Whilst admitting that such may be the condition of the water of many wells, doubts may arise with some, whether substances not decidedly poisonous, and received in such quantities, can, after all, be productive of much harm, or the real source of illness. To the great majority of people they are certainly harmless, but it must be admitted that there is a class, and one or more are found in almost every family, whose peculiar sensitive organization does not admit of the presence of any extraneous agent in food or drink, or in what they inhale. The functions of life and health are disturbed by the slightest deviation from the usual or normal condition of things around them.

It seems incredible that the thousandth part of a grain of one of the salts of lead, dissolved in water and taken daily, will disturb the system of any one; and yet such is the case. We can see no reason why a very little nitrate of potassa, or soda, or lime, taken in the same way, should produce any effect; still stranger is it that the infinitesimal amount of dust dislodged from painted wall-papers, received into the lungs, should make inroads upon the health.

Several instances of this latter result have recently come to my knowledge. In two families of the highest respectability in this city, illness of an unusual and protracted character existed, and at the suggestion of the physician, portions of the green wall-paper of the dwelling were submitted to me for analysis. The pigments were found to consist mainly of arseniate of copper, and upon the removal of the papers the illness disappeared. In experimenting with apparently the most suitable apparatus, and employing delicate chemical tests, in rooms the walls of which were covered with these arsenical papers, no evidence of the presence of poison in the atmosphere has been afforded; and this corresponds with the results of all similar experiments made in this country and in Europe, so far as my knowledge extends. We must conclude that agents not recognizable by chemical tests are capable of disturbing vital processes. The evidence is very clear that in instances of illness confined to one or two members of a household, the cause may be due to some accidental disturbance with which all are equally brought in contact, but which has not

the power of injuriously influencing but a part. It is also clear that these sources of disease are of such a character as easily to escape detection, and therefore any facts of experience which may serve as guides to their discovery are worthy of record.—*Journal of Health.*

FRIENDS' INTELLIGENCER.

PHILADELPHIA, SEVENTH MONTH 11, 1863.

As most of the Editorial Committee expect to be absent from the city for a few weeks, they hope this may be accepted as an apology, should correspondents find their communications sometimes unattended to.

Our correspondent, W. G., who replies in this number to the article entitled "Friends and Government Requisitions," which appeared in our paper of the 27th of 6th mo., must have attached a meaning to the phrase, "a disputed point," used in our editorial note, which it was not intended to convey. The expression simply meant, that though there appeared to be force in the suggestions of N. R., (and they are given but as suggestions,) they were not so self-evident that they did not admit of being disputed. If W. G. will again attentively read the essay in question, we think he will not be willing to characterize it as tending to "throw doubt upon, or disprove, the established testimonies held by Friends." N. R. begins by assuming the Christian testimony against war as one of those "first principles," to which he would have us recur, and it is alluded to throughout his essay as a *settled* principle among Friends, while the outward regulation which prescribes what shall be considered as a violation of this testimony, and how it shall be treated, he considers matters for examination and discussion.

It is greatly to be desired that the testimonies of Truth which we profess should not be held ignorantly and blindly as mere traditions, in which case they will be unaccompanied with charity; nor yet recklessly departed from because their beauty and value are not seen; and we should welcome whatever may make them a subject of thought among our members. We therefore do not share the fears of our correspondent, that discussions of this kind "tend to weaken and scatter;" for, if conducted in a candid and patient spirit, we cannot think they have such a tendency.

For Friends' Intelligencer.

PETROLEUM.

Inventions and discoveries, and the introduction of new articles into the purposes of life, succeed each other so rapidly that many important additions to the stock of human comforts and conveniences, pass with but little historical allusion to the circumstances of their origin.

Had it been predicted ten years ago, that a large portion of the population of this country, would at the present time be indebted for their illuminating conveniences to an article obtained directly from the earth; the predictor would probably have been placed in the same category with Fitch, of steamboat memory, some hundred years ago, who was regarded as partially insane by Philadelphia capitalists, for the reason that when applying to them for pecuniary aid, to construct a steamboat, he ventured to predict, that even if for want of assistance he should then fail to accomplish his purpose, still the time would certainly arrive when the noble Delaware would be navigated by steam, with a speed equal at least to five miles an hour.

The steam prediction was so improbable that it subjected Fitch to the imputation of mental alienation, and the predictor in regard to petroleum as an illuminator, would probably have shared the same imputation.

But the steam prediction has been more than realized, and petroleum, though its advent was but as yesterday, is now by the aid of steam and other agencies, conveyed to remote parts of this continent and to Europe also.

Although the knowledge of the article has, until quite recently, been restricted mostly to scientific persons, and to others living in the vicinity of the oil springs, yet historical allusions establish the knowledge of its existence in several of the Western States from a very early period, and in several European countries also; although in that portion of the globe it has as yet appeared in limited quantities, unless under a different name.

But the present bountiful flow of the article in the well-known oil localities of our own country, probably exceeds that of any other, although this may admit of a question. The petroleum springs and wells in the Burman empire, have long been known as pouring out an almost fabulous supply of the article. Professor Philips, of geological reputation, says that in that country, within two districts, not very remote from each other, are five hundred and twenty wells in full activity, furnishing four hundred thousand hogsheads annually, probably English measure, equal to eight hundred thou

sand barrels. I have seen no estimate of the production of our own country, but if it does not yet exceed the Asiatic supply, it probably will eventually; the seventy thousand barrels exported the past year being but a small part in the general production.

Petroleum consists mainly of carbon, and in this respect it is similar to many other articles known by different names, as naphtha, bitumen, asphaltum, benzoin, or as it is known in commerce, benzine, and also an article discovered by Humboldt, in the mountainous regions of South America, called by the natives, Moya, which issues from the earth in a semi-fluid condition, and in such quantities as to spread extensively over the ground, and which, upon exposure to the air, hardens, and is used by the inhabitants for fuel.

Professor Cleavland, some years ago advanced the opinion that petroleum is essentially the same as naphtha, and that naphtha becomes petroleum upon exposure to the atmosphere, after the loss of its more volatile particles. It is exceedingly inflammable. According to Philips, "Copious springs of naphtha occur also on the Caspian Sea. The earth in that vicinity constantly exhales its vapors, and it is said that the inhabitants, by concentrating this vapor and passing it through tubes, have a perpetual light, and that they cook their food by this kind of fire. It is collected by digging wells a few yards deep. It is also found in Sicily, Hungary, and Siberia, and the streets of Genoa are said to be lighted with it." The fact of its being exhaled from the earth in such quantities indicates that there are vast subterranean reservoirs, which, when explored, may rival the celebrated oil regions of our own country. The opinion of Professor Cleavland, that petroleum and naphtha are nearly identical, is rendered almost certain by the fact that American naphtha is becoming an article of commerce in our own country, being obtained in the process of the distillation or purification of crude petroleum, and is used extensively in cleansing wool, as a substitute for spirits of turpentine. As naphtha is found in combination or coincidence with petroleum here, it is not unlikely that petroleum may exist in a similar relative position with naphtha on the shores of the Caspian Sea, and other parts of Europe where naphtha abounds.

There are interesting historical incidents which indicate that extensive areas at the head of the Mediterranean and vicinity, were formerly strongly imbued with petroleum or naphtha, or a similar combustible substance. The city of Antioch, once renowned as the third city in point of importance in the world, was visited in the sixth century by an earthquake, and in addition thereto, a raging fire extended over a region of fifty miles in diameter, destroying the lives of nearly a quarter of a million of people. I do not allude to the earthquake as a remarkable phenomenon, or as differing in itself from other similar catastrophes, but rather for the purpose of inviting attention to the conflagration, which extended over and nearly desolated an area of fourteen hundred square miles.

It is evident that a "raging fire," to use the language of the historian, could not have swept over that extensive region, unless it were fed by some element different from what ordinarily supports combustion. For earthquakes are not necessarily, nor are they generally attended by conflagrations upon the earth's surface, and probably never so, unless petroleum, or naphtha, or benzine, or bitumen, or, I might add, asphaltum, in their concrete, or fluid, or gassified forms, are erupted from the earth by the disturbing causes which produce the concussion.

The Scriptural narrative of the destruction of Sodom and Gomorrah, of Adnah and Zeboim, derive some interest from this view of the subject. Their destruction is a subject of frequent allusion in Biblical history. Whatever is known of that dread catastrophe is derived from this source. The commonly received opinion that they were destroyed and swallowed up by an earthquake, and that the water of the Dead Sea flows over the ruins of those cities, and that their remains at times are visible, is probably fabulous and merely traditionary. If those cities were submerged or destroyed by an earthquake, the event is not recorded in Scripture; but Scripture narrative fully sustains the opinion that they were destroyed by a fire, similar to that which devastated the country in the region of Antioch.

The narrative of the sacred historian is exceedingly graphic and definite. "Then the Lord rained upon Sodom and Gomorrah brimstone and fire from the Lord out of heaven, and he overthrew those cities, and all the plain, and all the inhabitants of the cities, and that which grew upon the ground." "And Abraham gat up early in the morning to the place where he stood before the Lord, and he looked towards Sodom and Gomorrah, and towards all the land of the plain, and lo, the smoke of the country went up as the smoke of a furnace."

This visitation which destroyed those cities, and all the plain, *and all that grew upon the ground*, when the smoke of the country went up as the smoke of a furnace, and which occurred near four thousand years ago, is remarkably descriptive of the raging fire which devastated the country around Antioch, about twenty-four hundred years afterwards. The abundance of bitumen upon the shores and surface of the Dead Sea, indicates that that region abounds with the elements both subterranean and sub-aerial, similar to what produced the conflagration at Antioch and the surround-

ing country. When it is remembered that brimstone enters largely into the combination of bitumen, and that the whole region is bituminous, we may perceive the remarkable coincidental agencies by which "all the plain and all the cities of the plain, and all which grew upon the ground," and also the region around Antioch subsequently were destroyed.

The waters of the Dead Sea, which is not very remote from the Mediterranean, are represented by travellers as so abounding with bitumen, slime, or mineral pitch, as to be unsuitable for drink, and the sulphurous steam even affects fruit on the shore. Sulphur is well known to enter largely into the composition of bitumen, forming about thirty-five per cent of that article.

The circumstantial evidences then are, that petroleum, naphtha, bitumen, asphaltum, and their kindred combustible substances, abound in the localities named, in either a liquid or concrete form, to an extent which it is difficult to over-estimate. When it is considered that the celebrated oil regions of our own country have to be perforated frequently to the depth of five hundred to a thousand feet to obtain the article, while in Asia, and the borders of the Mediterranean, and in the vicinity of the Caspian Sea, it so abounds near the surface as to be collected from wells but a few feet deep, and in other instances as to exhale copiously from the surface of the earth, we are warranted in the opinion that the present supply of the article is but a precursor to the vast quantity which will yet be made available by the industry and ingenuity of man; and we are further warranted in the opinion that in other regions, now perhaps but partially explored, there are resources of this and similar substances sufficient to administer to the comfort and convenience of the human family through long periods of time. The suggestion that from the very earth is henceforth to be derived our principal illuminating element, and that the supply will likely continue unexhausted "through the ages of time," may well be regarded as a startling proposition, but not any more so than would have been the averment fifty years ago, that the State of Pennsylvania contains three hundred and sixteen thousand million tons of coal, that being the estimate of Professor Rogers, the State Surveyor of Pennsylvania, upon the subject; a quantity probably capable of supplying a population equal to the present coal consuming population of the Atlantic States thirty to forty thousand years.

The general opinion among geologists is that petroleum is the drainage or filtrate from coal beds, which, escaping from its connection or combination with coal, becomes collected into reservoirs, and eventually makes its way to the surface of the earth, or is reached by the deep penetrating implements of the oil-seeker. This solution of the question of origin is not sufficiently sustained by practical investigation to command our full assent. The more extensive the coal formation, and the greater the mass of the coal bed, the more likely would some oil be found in combination or connection with such coal deposits; but no such indications are to be found, or not to any satisfactory extent.

Heath's mine, in Virginia, is represented to contain a coal bed fifty feet in thickness; a coal bed near Wilkesbarre, Penn., is said to be twenty-five feet thick; at Mauch Chunk is a coal bed forty to fifty feet deep; and in the basin of the Schuylkill are fifty alternate seams of coal, twenty-five of which are more than three feet in thickness. In Nova Scotia is a coal formation fourteen hundred feet deep, and containing seventy-five alternate layers of coal. The Whitehaven coal mine in England, has been worked twelve hundred feet deep, and extends a mile under the sea, and the New Castle coal mine in the same country has been worked to the depth of fifteen hundred, and bored to the additional depth of fifteen hundred feet without finding the bottom of the coal measure. As these recitations comprise some of the most extensive coal deposits known, and as no oil indications, or none of considerable character have been discovered, we may, perhaps, for the present afford to be skeptical of the truth of the doctrine that petroleum is the drainage of coal beds. I am aware of the argument that is generally used, that reservoirs of petroleum may exist hundreds of miles from the coal formations whence they are supposed to have their origin. This argument, however, does not enlighten the subject. The mighty Mississippi may be traced thousands of miles to its minutest origin, but the little rills, however small, are there, and are discoverable, and it is difficult to form or imagine a geological argument, why, if petroleum is the drainage of coal, some little oil rills are not found deep down in the caverns of the coal formations.

I suppose, however, that the general opinion among geologists is, that petroleum is derived from coal beds, and that coal formations are traceable to vast accumulations of vegetable substances, the process going on through untold ages of time, and that the preternatural growth of the then existing vegetable organisms was stimulated and fostered by a preponderating accumulation of carbonic acid gas, existing in combination with the atmosphere. In the language of an interesting author, "The vast store-house of fuel in the form of coal, which is now locked up in the earth, subject to the demand of labor, floated in the atmosphere of an age long since past. At that age neither man nor any other land animal could exist, as the air was charged with a deadly gas."

The above quotation may be received as an evidence that even the granite science of geology has not entirely escaped the invasion of undemonstrative theories. This doctrine, however, will doubtless be generally accepted by geologists, (although it can hardly fail to be unsatisfactory to many independent thinkers,) until a more satisfactory one can be presented, as illustrated by the procedure of the early Puritans of Connecticut, who, in the absence of anything better, enacted the following: "Resolved, that the word of God be the law of the land until we have time to make a better."

Professor Silliman, in his earlier geological career, advanced some sentiments which, in his maturer judgment, he would doubtless have regarded as almost puerile, and it would be neither strange nor unexpected, if the rapidly progressing condition of geological science should materially modify some of the present popular doctrines in relation to the origin of petroleum and other kindred substances.

GIDEON FROST.

Matinicock, Long Island, 6th mo., 1863.

From the North British Review.

VEGETABLE EPIDEMICS.

Hardly any class of organic agencies are more wonderful or more interesting than the fungi, whose minute forms and insignificant appearance beneath and in the midst of the great bustling world of sense and sight escape our ordinary observation. In this obscure and subordinate position, kept down by the healthy energies of higher organisms, and prevented from increasing too rapidly and spreading too widely by a nice balance of physical conditions, they are important and indispensable auxiliaries in the operations of nature. Upon them devolves the duty of accelerating the natural process of decay—absorbing into living tissues, and thus rendering innocuous, the poisonous gases continually exhaled into the atmosphere by dead and decomposing substances, and preparing from the corrupted masses of effete, organic matter, a fertile soil in which future plants may grow; the exuviæ of one generation, elaborated by their mysterious chemistry, serving as the materials for the support and maintenance of the next. Standing on the borders of the mineral kingdom, and occupying the place of junction of the two great confluent streams of animal and vegetable life, they are obviously designed to arrest the fleeting particles which, having served their purpose in one form of organization, are fast hastening downwards to the night of chaos and death, and send them once more in new forms, and with new properties, to keep the vortex of life in ceaseless motion.

Such are their highly useful functions in ordinary circumstances; but when the balance of nature is overturned, and the restraints of her laws partially removed, they suddenly start up into gigantic, mutinous life—are multiplied till they become overwhelming—and by the sheer force of countless numbers, ravage and destroy everything before them. Just as the electrical forces are continually playing harmlessly around us, circulating through the smallest particles of matter as well as among its mightiest masses, giving health and energy to plants and animals, and motion to our earth and surrounding worlds, but when certain conditions are present, or certain barriers removed, the lightnings flash, the thunders roar, and the awful storm goes forth on its work of destruction; so the seeds and germs of these obscure and unnoticed agencies are floating harmlessly in countless myriads on every breeze—in the air of our houses—lying on the various objects around us, could we see them sufficiently magnified—on the earth—in the waters,—everywhere;—their mature forms are laboring incessantly and beneficially in dark and lonely places, concealed and overtopped, as it were, by the higher types of life; but when atmospheric and other conditions favorable for their development are present, they burst the bands which previously confined them, and revel in a wildness and prodigality of life which is truly astounding. We are surrounded by, we are living in the very midst of, a world of organic forces, possessed of incalculable powers of harm, which may at any time be let loose and overwhelm us; but the same Power which safely imprisons the nascent earthquake in the rocky chambers of the earth, and chains the subtle forces of electricity in the bosom of the cloud, restrains the ravages of these mysterious powers, and employs them as useful and beneficial agents, except at rare intervals, when they are permitted to act as the ministers of His vengeance, and bring the guilty nations to repentance. Such a thought as this may seldom occur to our minds, owing to the long-continued and uniform stability of nature's laws; but it is one which ought to excite in us, even in the most favorable circumstances, a deep sense of our helplessness and dependence.

If we compare the two kingdoms—the animal and vegetable—with each other, we shall find many striking points of resemblance between them, indicating that the life which pervades both is the same in kind, though different in degree. The stem and branches of a plant may be compared to the skeleton of an animal; the pith of young trees and shrubs to the spinal marrow, the upward current of the sap in spring, and its descent in summer or autumn, is like the circulation of the blood, which fluid, it is worthy of remark, is green in the one and red in other—the two most obvious

complementary colors; while the exhalation of carbonic acid gas in the leaves, which are the lungs of plants, resembles the respiration of animals. This curious analogy between the two departments of organic nature may be traced, not only in their structure, and the respective functions which they perform, but also in the derangements which occasionally occur in these, produced by unfavorable external circumstances. As animals are subject to diseases caused by filthy habits, vitiation of the air, overcrowding, or famine; so are plants rendered unhealthy by improper cultivation or unsuitable meteorological conditions. The epidemics of animals have their counterparts in the blights of plants. Animal epidemics are the terrible yet wise and beneficent means employed by Providence for sweeping away at once, and with the smallest amount of suffering possible, creatures whose constitutions had been enfeebled by a long course of unnatural living, and whose lives had in consequence, become a burden to themselves, and thus paving the way for the introduction of more healthy and vigorous races, propagated by the individuals whose stronger physical powers enabled them to survive the general wreck. Vegetable epidemics, on the other hand, which are most frequent and destructive among the plants which are reared by man for his food, are wisely designed as wholesale remedies for the evils produced by unskilful culture and unfavorable climatic circumstances; degenerate forms being thus extirpated, and a hardier stock saved to become the progenitors of more useful varieties. Animal epidemics are supposed to be caused by an animal poison, the product of decomposed animal matter excreted by the human body itself; so the blights of plants are caused by vegetable parasites—the morbific agencies in either case being derived from the same order to which each respectively belongs. All animal epidemics, though possessed of distinctive characters, which warrant us in regarding them as specifically different diseases, have yet so much in common, as to indicate that they belong to one family or class—the same conditions which favor or prevent the propagation of one, favoring or preventing the propagation of all; so on the other hand, all vegetable epidemics are caused by different species or forms of one great group of fungi, which require the same circumstances for their development—and conversely may be prevented by the application of the same remedies. We find, also, that while there have been several memorable plagues—such as the black death and the sweating sickness of the Middle Ages—which revolutionized society by their effects, and stand out as prominent landmarks in history,—certain forms of fever and other contagious diseases seem to be inseparable from man's social condition, being present with greater or less virulence among large populations everywhere; so, on the other hand, in regard to vegetable epidemics, while several notorious plagues—such as the potato and vine diseases—have sprung up suddenly, raged universally over a large geographical area, reached a climax, and then to a certain extent subsided, there are forms of blight—such as those affecting the cereal crops—that are continuous, appearing season after season, though not to an alarming extent,—found more or less in every field, and seeming to be so closely connected, physiologically, with the corn plants, that we can scarcely ever hope to see them completely eradicated. And lastly, to complete the list of these curious analogies, animal and vegetable epidemics are very frequently co-related—the one following or being produced by the other.

The pestilence, by an inevitable necessity, follows close on the footsteps of the famine-blight; while the advent of wide-spread plagues in the Middle Ages was invariably heralded by a vast development of parasitic fungi—thus proving that the same abnormal conditions of the atmosphere which are injurious to plants in a state of cultivation, are also injurious to man in a state of society. One of the most interesting, and at the same time perplexing problems in botany, meets us at this, the threshold of our inquiry, viz., the origin of the so-called vegetable epidemics. We have asserted—and this is pretty generally admitted—that fungi are the immediately exciting, but what the predisposing causes? Are these vegetable parasites which appear on our blighted food-plants the primary cause or the secondary effect of the diseases with which they are connected? To this question various answers have been given more or less satisfactory; and at the present moment it divides the schools of science. Fungi, as a class, vegetate on decayed substances. They are not, therefore, strictly speaking, true parasites, inasmuch as they are incapable of contending with the vital forces of plants when healthy and growing. They require a dead and decomposing matrix. They are incapable of eliminating the elements on which they subsist from living substances. Their seeds may circulate in the tissues of living plants, from the seed up to the flowering and fruiting; but they remain innocuous in an undeveloped state—kept in check by the strength of the vital principle, until symptoms of decay begin to appear, when immediately they break their fetters,—seize upon the decomposing parts with their tiny fangs,—develop themselves speedily into perfect fungi,—multiply themselves into a colony, and luxuriate on the affected plant, until the work of destruction is complete. In most cases, the pro-

cess of decay must be pretty far advanced; the withered leaf or branch must have fallen from the tree, and been exposed for a considerable time to the decomposing influences of the weather, before any fungi make their appearance upon it. But, though this be the habit of the family generally, there are striking exceptions. There is one group, whose peculiarity it is to grew only on living plants in the manner of true parasites. They appear on the healthiest and most luxuriant individuals, and are never found on dead or decaying substances. So far as the most minute microscopical examination can determine, they are not preceded by any change in the constitution of the plants to which they attach themselves, any alteration of tissue, any symptom of decay or death, any predisposing peculiarity whatever,—their presence being influenced solely by circumstances of proximity, or by the atmospheric conditions. This exceptional fact places the question of the origin of vegetable epidemics on a more satisfactory basis. It indicates that the truth lies between the two opposite opinions commonly entertained—that fungi in some cases are the primary exciting causes, while in other cases they are the secondary effects. The blights that affect cultivated plants may be divided into two great groups, characterized by different phenomena, though to a certain extent correlated, viz, those which infest the cereals, and those which infest green crops, whether of the garden or field. The former are caused by a peculiar class of fungi called Uredines, which grow only on living plants; the latter are connected with another class of fungi called Mucedines, which generally require certain morbid alterations of tissue or function, and other predisposing causes, before they make their appearance. If we bear this arrangement in mind, it will enable us to understand something of the nature and habits of the different vegetable epidemics, and throw some light on that proverbial darkness in which the pestilence has ever walked, from the days David till the present time.

(To be continued.)

ALL'S WELL.

BY HARRIET M'EWEN KIMBALL.

The day is ended. Ere I sink to sleep
My weary spirit seeks repose in Thine:
Father! forgive my trespasses, and keep
This little life of mine.

With loving kindness curtain thou my bed;
And cool in rest my burning pilgrim-feet;
Thy pardon be the pillow for my head—
So shall my sleep be sweet.

At peace with all the world, dear Lord, and thee,
No fears my soul's unwavering faith can shake;
All's well! whichever side the grave for me
The morning light may break!

—*Boston Revew.*

Selected.

THE WORLD HARVEST.

They are sowing their seed in the daylight fair,
They are sowing their seed in the noonday's glare,
They are sowing their seed in the soft twilight,
They are sowing their seed in the solemn night—
What shall the harvest be?

They are sowing their seed of pleasant thought,
In the Spring's green light they have blithely wrought;
They have brought their fancies from wood and dell,
Where the mosses creep and the flower buds swell;
Rare shall the harvest be!

They are sowing the seed of word and deed,
Which the cold know not, nor the careless heed;
Of the gentle word and the kindest deed,
That have blest the heart in its sorest need;
Sweet shall the harvest be!

And some are sowing the seeds of pain,
Of late remorse and in maddened brain,
And the stars shall fall and the sun shall wane,
Ere they root the weeds from their soil again;
Dark will the harvest be!

And some are standing with idle hand,
Yet they scatter seed on their native land;
And some are sowing the seeds of care,
Which their soil has borne and still must bear;
Sad will the harvest be!

They are sowing the seed of noble deed,
With a sleepless watch and an earnest heed;
With a ceaseless hand o'er the earth they sow,
And the fields are whitening where'er they go;
Rich will the harvest be!

Sown in darkness or sown in light,
Sown in weakness or sown in might,
Sown in meekness or sown in wrath,
In the broad work field or the shadowy path,
Sure will the harvest be!

For Friends' Intelligencer.

THE WEATHER LAST WEEK.

Thermometer. 6th & 7th months.	6 A. M.	9 A. M.	12 M.	3 P. M.	6 P. M.	Mean.	Mean of Barometer.
29	62	72	75	78	76	72·6	30·0
30	65	77	85	83	78	77·6	29·½
1	65	70	74	77	76	72·4	29·½
2	70	77	81	82	79	78·0	30·0
3	71	78	85	88	84	81·2	30·0
4	72	80	85	85	77	80·0	30·0
5	67	68	70	67	67	68·0	30·½

Wind.									
29	N	E	N	E	S	E	S	E	Cloudy.
30	S	E	S	E	S		S		Clear.
1	N	E	S		S		S	E	Clear.
2	S		S		S	W	S	W	Clear.
3	S	W	S	W	S	W	S	W	Clear.
4	S	W	S	W	S		S		Clear.
5	S	E	S	E	S	E	S	E	Cloudy.

Mean of week 75·7.
Same time last year 72·1.

Mean of the month 70·0.
Same time last year, 69·4.
Rain during the month, 5⅝ inches.
Same last year, 7¼ inches.
Mean of the past six months, 49·85.
Mean of same time last year, 49·27.
Quantity of rain and snow water the past six months, 36⅝ inches.
Ditto for the first six months of last year, 28⅝ inches.

HOMER EACHUS.

From Good Words.

ABOUT VOLCANOS AND EARTHQUAKES.

BY SIR JOHN HERSCHEL.

(Continued from page 270.)

This, then, is the manner in which the earthquake does its work; *and it is always at work.* Somewhere or other in the world, there is perhaps not a day, certainly not a month, without an earthquake. In those districts of South and Central America, where the great chain of volcanic cones is situated—Chimborazo, Cotopaxi, and a long list with names unmentionable, or at least unpronounceable—the inhabitants no more think of counting earthquake shocks than we do of counting showers of rain. Indeed, in some places along that coast, a shower is a great rarity. Even in our own island, near Perth, a year seldom passes without a shock, happily, within the records of history, never powerful enough to do any mischief.

It is not everywhere that this process goes on by fits and starts. For instance, the northern gulfs, and borders of the Baltic Sea, are steadily shallowing, and the whole mass of Scandinavia, including Norway, Sweden, and Lapland, is rising out of the sea at the average rate of about two feet per century. But as this fact (which is perfectly well established by reference to ancient high and low water-marks) is not so evidently connected with the action of earthquakes, I shall not further refer to it just now. All that I want to show is, that there is a great cycle of changes going on, in which the earthquake and volcano act a very conspicuous part *and that part a restorative and conservative one*, in opposition to the deadly destructive and levelling action of the ocean waters.

How this can happen, what can be the origin of such an enormous power thus occasionally exerting itself, will no doubt seem very marvellous,—little short, indeed, of miraculous intervention,—but the mystery, after all, is not quite so great as at first it seems. We are permitted to look a little way into these great secrets of nature; not far enough, indeed, to clear up every difficulty, but quite enough to penetrate us with admiration of that wonderful system of counterbalances and compensations, that adjustment of causes and consequences, by which, throughout all nature, evils are made to work their own cure, life to spring out of death, and renovation to tread in the steps and efface the vestiges of decay.

The key to the whole affair is to be found in the central heat of the earth. This is no scientific dream, no theoretical notion, but a fact established by direct evidence up to a certain point, and standing out from plain facts as a matter of unavoidable conclusion in a hundred ways.

We all know that when we go into a cellar out of a summer sun, it feels *cool*, but when we go into it out of a wintry frost it is *warm*. The fact is, that a cellar, or a well, or any pit of a moderate depth, has always, day and night, summer and winter, the same degree of warmth, the same *temperature*, as it is called, and *that* always and everywhere is the same, or nearly the same, as the average warmth of the climate of the place. Forty or fifty feet deep in the ground, a thermometer here, in this spot,* would always mark the same degree, forty-nine degrees that is, or seventeen degrees above the freezing point. Under the equator, at the same depth, it always stands at eighty-four degrees, which is our *hot summer* heat, but which there is the average heat of the whole year. And this is so everywhere. Just at the surface, or a few inches below it, the ground is warm in the daytime, cool at night; at two or three feet deep the difference of day and night is hardly perceptible, but that of summer and winter is considerable. But at forty or fifty feet this difference also disappears, and you find a perfectly fixed, uniform degree of warmth, day and night, summer and winter, year after year.

But when we go deeper, as, for instance, down into mines or coal-pits, this one broad and general fact is always observed,—everywhere, in all countries, in all latitudes, in all climates, wherever there are mines, or deep subterranean caves,—the deeper you go, the hotter the earth is found to be. In one and the same mine, each particular depth has its own particular degree of heat, which never varies, but the lower always the hotter; and that not by a trifling, but what may well be called an astonishingly rapid rate of increase,—about a degree of the thermometer additional warmth for every ninety feet of additional depth, which is about fifty-eight degrees per mile!—so that, if we had a shaft sunk a mile deep, we should find a heat of one hundred and five degrees, which is much hotter than the hottest summer day ever experienced in England.

It is not everywhere, however, that it is worth while to sink a shaft to any great depth; but borings for water (in what are called

* At Hawkhurst in Kent.

Artesian wells), are often made to enormous depths, and the water always comes up hot; and the deeper the boring, the hotter the water. There is a very famous boring of this sort in Paris, at La Grenelle. The water rises from a depth of 1,794 feet, and its temperature is eighty-two degrees of our scale, which is almost that of the equator. And again, at Salzwerth, in Oeynhausen, in Germany, in a boring for salt-springs 2,144 feet deep, the salt water comes up with a still higher heat, viz., ninety-one degrees. Then, again, we have natural hot-water springs, which rise, it is true, from depths we have no means of ascertaining, but which from the earliest recorded times, have always maintained the same heat. At Bath, for instance, the hottest well is one hundred and seventeen degrees Fahr. On the Arkansas River, in the United States, is a spring of one hundred and eighty degrees, which is scalding hot; and that out of the neighborhood of any volcano.

Now, only consider what sort of a conclusion this lands us in. This globe of ours is eight thousand miles in diameter; a mile deep on its surface is a mere scratch. If a man had twenty great-coats on, and I found under the first a warmth of sixty degrees above the external air, I should expect to find sixty degrees more under the second, and sixty degrees more under the third, and so on; and within all, *no man*, but a mass of red-hot iron. Just so with the outside crust of the earth. Every mile thick is such a great-coat, and at twenty miles depth, according to this rate, the ground must be fully red-hot; and at no such very great depth beyond, either the whole must be melted, or only the most infusible and intractable kinds of material, such as our fire-clays and flints, would present some degree of solidity.

In short, what the icefloes and icebergs are to the polar seas, so we shall come to regard our continents and mountain ranges in relation to the ocean of melted matter beneath. I do not mean to say there is no solid central mass; there may be one, or there may not, and, upon the whole, I think it likely enough that there is—kept solid, in spite of the heat, by the enormous pressure; but that has nothing to do with my present argument. All that I contend for is this,—grant me a sea of liquid fire, on which we are all floating, land and sea; for the bottom of the sea, anyhow, will not come nearly down to the lava level. The sea is probably nowhere more than five or six miles deep, which is far enough above that level to keep its bed from becoming red-hot.

Well, now, the land is perpetually wearing down, and the materials carried out to sea. The coat of heavier matter is thinning off towards the land, and thickening over all the bed of the sea. What must happen? If a ship floats even on her keel, transfer weight from the starboard to the larboard side, will she continue to float even? No, certainly. She well heel over to larboard. Many a good ship has gone to the bottom in this way. If the continents are lightened, they will rise; if the bed of the sea receives additional weight, it will sink. The bottom of the Pacific is sinking, in point of fact. Not that the Pacific is becoming *deeper*. This seems a paradox; but it is easily explained. The whole bed of the sea is in the act of being pressed down *by the laying on of new solid substance over its bottom*. The new bottom then is laid upon the old, and so the actual bed of the ocean remains at the same distance from the surface water. But what becomes of the islands? They form part and parcel of the old bottom; and Dr. Darwin has shown, by the most curious and convincing proofs, that they *are sinking*, and *have been sinking for ages*, and are only kept above water—by what, think you? By the labors of the coral insects, which always build up to the surface!

It is impossible but that this increase of pressure in some places and relief in others must be very unequal in their bearings. So that at some places or other this solid floating crust must be brought into a state of strain, and if there be a weak or a soft part, a crack will at last take place. When this happens, down goes the land on the heavy side, and up on the light side. Now this is exactly what took place in the earthquake which raised the Ullah Bund in Cutch. I have told you of a great crack down across the country, not far from the coast line; the inland country rose ten feet, but much of the sea-coast, and probably a large tract in the bed of the Indian Ocean, sunk considerably below its former level. And just so you see when a crack takes place in the ice, the water oozes up, so this kind of thing is always, or almost always followed by an upburst of the subterranean fiery matter. The earthquake of Cutch was terminated by the outbreak of a volcano at the town of Bhooi, which it destroyed.

(To be continued.)

From the Atlantic Monthly.

DRESS.

No subject is so intimately connected with the health of the respiratory apparatus as dress. And, as bearing upon pulmonary consumption, there are certain errors in the dress of children which must be noticed. I believe I echo the voice of my profession, when I declare that the seeds of consumption are planted in thousands by these mistakes in dress during infancy and childhood. To correct these, permit me a few practical suggestions.

The skirt-bands must be left very loose. If you would give the baby's lungs and heart the best chance for development, the dress about the chest and waist should be so loose that if the child be held up by the shoulders, its entire dress, except as sustained by the shoulders, will fall to the floor. With such a dress the blood is so much sooner oxygenated, that, other things being equal, the characteristic dark red color of the skin will disappear much sooner than with a close dress.

The bones surrounding the small, feeble lungs, now for the first time beginning to move, are so soft and pliable, that under the slightest pressure, they will yield, and the capacity of the lungs be reduced. Yet I have seen the nurse use the entire strength of her fingers in the first application of the skirt-bands. No thoughtful person, acquainted with the anatomy of the thorax in a new-born babe can escape the conclusion that its vitality is seriously compromised by this pressure upon the principal organs of that vitality. In many instances I have seen the character of the little one's respiration and pulse decidedly affected by enlarging the skirt-bands.

Mothers, if you think all this pressure necessary to give your babies a form, as I have heard some of you say, you forget that the Creator of your child has all wisdom and skill, and that any changes in the babe's form and proportions must prove only mischievous. And perhaps you may not feel your pride hurt by the suggestion that His taste is quite equal to yours. That a corset or other machine is needed to give a human being a form, as is so often suggested, is an imputation on the Creator which no thoughtful and conscientious person can indulge.

BEST MATERIAL FOR DRESS.

In all seasons of the year, and in all climates, the best material for dress, for old and young, for strong and weak, is woollen. It is the poorest conductor of heat, and therefore secures the most equable temperature. This is the principal object of dress. The superiority of woollen clothing for babes is even greater in July than in January. In the warmest days a single thickness of soft flannel will suffice. But if linen or cotton be worn, the garment is soon moistened by perspiration, and two or three additional thicknesses are needed to protect the child against the ill effects of a draught.

In warm weather we find it necessary to wear woollen garments in the gymnasium, as a protection against a chill from draughts while perspiring. Blacksmiths, glass-blowers, furnacemen, and others exposed to the highest temperatures, find woollen indispensable.

Few practices will do so much to secure the comfort and protect the health of young children as dressing them in flannel night and day, the year round. It may be objected that flannel irritates a delicate skin. This is often so, as the skin is now treated. But there is no baby's skin so thin and delicate that daily bathing and faithful friction may not remove this extreme susceptibility. And as the skin is the organ upon which the outer world makes its impressions, nothing is more important than that all morbid susceptibility should be removed.

An additional advantage in the use of flannel is, that it serves by its mechanical effect to keep up a healthy surface circulation, which is one of the vital conditions of health. The skin and the lungs act and react upon each other more directly, if possible, than any other two organs of the body. Children born with a predisposition to consumption, especially, need a vigorous treatment of the skin.—*Dr. Dio Lewis.*

PREPARE FOR THE BIRDS.

If you wish to secure the assistance of the nicest little garden help in the world, put up plenty of bird boxes. For the sake of good taste make the boxes like little cottages; have them with doors or holes of different sizes, so the martens can get in at some, the blue birds at others, and the little wrens at others still; then the big birds will not drive off the little ones.

It is a very good way to fix the bird box upon the top of a stout post, so it will stand about eight feet high when the post is set in the ground, then plant the post firmly in the ground, and teach the children and fools not to disturb the little feathered folks in their cottage homes. The boxes for martens should be placed higher and more retired than for the smaller birds. On the top of a barn or carriage-house, or upon a post twenty feet high, are good locations.

The martens will keep off the hawks from the chicken yard, and the blue birds and wrens will snap up myriads of pestiferous insects that would prey upon the fruit; and all will cheer you with their grateful music and repay your pains a thousand fold.—*Ohio Farmer.*

PHILADELPHIA MARKETS.

FLOUR AND MEAL.—There is little export demand for Flour, and only a few hundred barrels sold for the supply of the retailers and bakers, at $5 87 a 6 00 per barrel for superfine, $6 12 a 6 31 for extra, $6 50 a 7 00 for extra family, and $7 25 up to $8 25 for fancy brands. Rye Flour and Corn Meal are quoted at $4 75 for the former, and $4 for the latter.

GRAIN.—The receipts of Wheat are small, and the demand is light. Prime Pennsylvania red afloat sold at $1 50 a 1 51, and good white at $1 60 a 1 70. Rye is steady at $1 05. Corn is scarce, and prime yellow commands 86 a 87 cts. Oats are firmer; sales of Pennsylvania at 75 cents. Prices of Barley and Malt are nominal.